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EXAMINER

SHIFERAW, ELENI A

ART UNIT

PAPER NUMBER

2136

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/896,088	ELLISON ET AL.	
	Examiner	Art Unit	
	Eleni A Shiferaw	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>08/26/2002</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-29 are presented for examination.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 6, 8, & 12-15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et al. (Tiedemann, US Patent No.: US 6,216,004 B1) in view of Epstein (Patent No.: US 6,601,172 B1).

1. As per claim 1, and 13, Tiedemann teaches a method or software stored in platform readable medium executed by internal circuitry within a computing unit, the method or software comprising:

(a) generating a key hash result partially based on a global identifier of a source and an estimated current time at the source (Tiedemann Col. 18 lines 53-col. 19 lines 40);

(b) producing a first time-varying item based on the key hash result (Tiedemann Col. 18 lines 53-col. 19 lines 40, col. 16 lines 24-33); and

(c) presenting the first time-varying item , and a second time-varying item being presented at the source (Tiedemann Col. 18 lines 53-col. 19 lines 40, col. 16 lines 24-33);

Tiedemann does not explicitly teach (c) presenting the first time-varying item for comparison with a second time-varying item being presented at the source;

However Epstein discloses comparing a first hash and a second hash that reads on presenting the first time-varying item for comparison with a second time-varying item being presented at the source (Epstein Col. 7 lines 15-47);

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Epstein with in the system of Tiedemann because it would allow to determine the origin of the time stamp and that the contents of the time stamp including the digital time have not been altered (Epstein Col. 7 lines 15-47).

As per claim 3, Tiedemann and Epstein teach all the subject matter as described above. In addition Tiedemann discloses the method further comprising: (d) repeating (a), (b) and (c) for each subsequent presentation of a newly produced first time-varying item and comparison of the newly produced first time-varying item with a newly produced and presented second time-varying item. (Tiedemann and Epstein teach (a), (b), and (c) as cited on claim 1, it would have been obvious to one ordinary skill in the art at the time of the invention to repeat (a), (b), and (c) because it would give accurate result that the two keys are identical).

As per claim 4, Tiedemann and Epstein teach all the subject matter as described above. In addition Tiedemann discloses the method, wherein prior to generating the key hash result, the method further comprises:

receiving a verification packet from the source (Tiedemann Col. 19 lines 48-67), the verification packet including the global identifier of the source and a local time value at which the verification packet was formed at the source (Tiedemann Col. 19 lines 32-40; it would have been obvious to one having ordinary skill in the art at the time of the invention was made to receive a verification packet prior to generating the key hash result because it would allow to hold the time at the first unit to compute the time skew).

As per claim 6, Tiedemann and Epstein teach all the subject matter as described above. In addition Tiedemann discloses the method, wherein the verification packet further includes a data field to contain information to be transferred (Tiedemann Col. 19 lines 48-67).

As per claim 8, Tiedemann and Epstein teach all the subject matter as described above. In addition Epstein discloses the method, wherein the verification packet further includes a digital signature of contents of the verification packet (Epstein Col. 7 lines 1-14).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Epstein with in the system of Tiedemann because it would allow to verify the origin or first device by creating a time stamp and digital signature (Epstein Abstract).

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As per claim 12, Tiedemann and Epstein teach all the subject matter as described above. In addition Epstein discloses, wherein the presenting of the first time-varying item further comprises contemporaneous play back of audible sounds associated with both the first and second time-varying items for auditory comparison (Epstein Col. 5 lines 15-47). The rational for combining are the same as claim 1 above.

As per claim 14, Tiedemann and Epstein teach all the subject matter as described above. In addition Tiedemann discloses the software, wherein the first, second and third software modules repeatedly generate a new key hash result (Tiedemann Col. 18 lines 53-67), produce a new first time-varying item and present the new first time-varying item for each subsequent presentation of a newly produced first time-varying item (Tiedemann Col. 19 lines 32-40) and compare the newly produced first time-varying item with a newly produced and presented second time-varying item (Epstein Col. 7 lines 15-47). The rational for combining are the same as claim 1 above.

As per claim 15, Tiedemann and Epstein teach all the subject matter as described above. In addition Tiedemann discloses the software further comprising:

a fourth software module to receive a verification packet from the source, the verification packet including the global identifier of the source and a local time value at which the verification packet was formed at the source (Tiedemann Col. 19 lines 32-55).

Claims 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et

al. (Tiedemann, US Patent No.: US 6,216,004 B1) in view of Gehrmann (Pub. No.: US 2001/0016909 A1).

As per claim 19, Tiedemann teaches a computing unit comprising:

a casing (Tiedemann Col. 9 lines 36-54);

an input/output (I/O) interface (Tiedemann Col. 11 lines 13-23) ;

a device that provides sensory data for a user (Tiedemann Col. 8 lines 37-47), the device being integrated into the casing (Tiedemann Col. 20 lines 28-39); and

the internal circuitry to generate a key hash result based on a global identifier of a source and an estimated current time at the source (Tiedemann Col. 19 lines 32-40);

Tiedemann does not explicitly teach the internal circuitry contained within the casing and controlling information presented by the device, the internal circuitry to generate a key hash;

However Gehrmann teaches teach the internal circuitry contained within the casing and controlling information presented by the device, the internal circuitry to generate a key hash;(Gehrmann Page 3 par. 0030),

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Gehrmann with in the system of Tiedemann because it would allow to establish a security relation between a first device and a second device within an ad hoc communications network (Gehrmann Page 3 par. [0030-0031]).

As per claim 20, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein the internal circuitry is a memory

and a processor accessing information from the memory (Tiedemann Fig. 3 No. 46).

As per claim 21, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein the I/O interface is an antenna to receive signals from the source and provide the signals to the internal circuitry for processing (Tiedemann Fig. 3 No. 30).

As per claim 22, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein the I/O interface to receive a verification packet including at least the global identifier and a local time value at which the verification packet was formed prior to transmission to the computing unit (Tiedemann Col. 19 lines 32-67 (Tiedemann Col. 19 lines 32-40; it would have been obvious to one having ordinary skill in the art at the time of the invention was made to receive a verification packet prior to generating the key hash result because it would allow to hold the time at the first unit to compute the time skew).

As per claim 23, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein the internal circuitry generates the key hash result based on the global identifier, the estimated current time at the source and data contained in a data field of the verification packet (Tiedemann Col. 18 lines 53-col. 19 lines 40).

As per claim 24, Tiedemann and Gehrmann teach all the subject matter as described above. In

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addition Tiedemann discloses the computing unit, wherein device is a display screen that displays the information being time-varying images (Tiedemann Col. 9 lines 36-54).

As per claim 25, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein device is at least one speaker that playback audible sounds which vary in time based on a value of the key hash result (Tiedemann Col. 10 lines 7-20).

As per claim 26, Tiedemann and Gehrmann teach all the subject matter as described above. In addition Tiedemann discloses the computing unit, wherein device is at least a tactile device that produces Braille patterns which vary in time based on a value of the key hash result (Tiedemann Page 3 lines 37-54).

6. Claims 2, 9, 11, 16, 18, & 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et al. (Tiedemann, US Patent No.: US 6,216,004 B1) in view of Epstein (Patent No.: US 6,601,172 B1), and in further view of Skelly et al. (Skelly, Patent No.: US 6,661,810 B1).

As per claim 27, Tiedemann teaches a network comprising:
a first computing unit to

(i) transmit successive verification packets each including a static global identifier and a varying local time value realized at the first computing unit during formation of that verification packet (Tiedemann Col. 19 lines 32-col. 20 lines 9),

(ii) generate successive first time-varying items based on contents provided within their corresponding verification packet (Tiedemann Col. 18 lines 53-col. 19 lines 40, col. 16 lines 24-33), and

(iii) present the first time-varying items in successive fashion (Tiedemann Col. 19 lines 32-40); and

a second computing unit to

(i) receive each verification packet (Tiedemann Col. 19 lines 47-55),

(iii) generate successive second time-varying items based on contents provided by their corresponding verification packet (Tiedemann Col. 18 lines 53-col. 19 lines 40, col. 16 lines 24-33),

(iv) present the second time-varying items, and the first time-varying items (Tiedemann Col. 18 lines 53-col. 19 lines 40, col. 16 lines 24-33);

Tiedemann does not explicitly teach (iv) present the second time-varying items for comparison with the first time-varying items;

However Epstein discloses comparing a first hash and a second hash that reads on to present the second time-varying items for comparison with the first time-varying items (Epstein Col. 7 lines 15-47);

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Epstein with in the system of Tiedemann

because it would allow to determine the origin of the time stamp and that the contents of the time stamp including the digital time have not been altered (Epstein Col. 7 lines 15-47).

Tiedemann and Epstein do not explicitly teach a second computing unit to

(ii) compute a clock skew to determine a time difference between the first computing unit and the second computing unit in response to receipt of a first verification packet,

However Skelly teaches calculating a clock skew to determine a time difference between the first computing unit and the second computing unit in response to receipt of a first verification packet (Skelly Col. 7 lines 7-28).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Skelly within the combination system of Tiedemann and Epstein because it would allow to obtain a calculated set of delay measurements consisting of the amounts determined by subtracting the time duration between the first packet's departure and each subsequent packet's departure as measured by the sender clock from the time duration between the first packet's arrival and each subsequent packet's arrival as measured by the receiver clock (Skelly Col. 10 lines 29-49).

As per claim 2, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Tiedemann discloses the method, wherein the presenting of the first time-varying item is contemporaneous with presentation of the second time-varying item if the global identifier of the source is accurately received (Tiedemann Col. 19 lines 32-40) and the current time at the source has been accurately estimated (Skelly Col. 6 lines 19-53, and Col. 7 lines 7-

28). The rational for combining are the same as claim 27 above.

As per claim 9, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Tiedemann teaches the method, wherein the generating of the key hash result further comprises: performing a cryptographic hash operation on a combination of at least the global identifier and the estimated current time (Tiedemann Col. 19 lines 32-40); and

Skelly teaches computing a clock skew by recording a receipt time upon which the verification packet is received and computing a time difference between the receipt time and the local time value (Skelly Col. 7 lines 7-28); and

computing the estimated current time at the source corresponding to a current time at a destination based on the clock skew (Skelly Col. 6 lines 19-53). The rational for combining are the same as claim 27 above.

As per claim 11, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Skelly teaches the method, wherein the presenting of the first time-varying item further comprises displaying the first time-varying item contemporaneously with a display of the second time-varying item for visual comparison (Skelly Col. 5 lines 1-37). The rational for combining are the same as claim 27 above.

As per claim 16, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Tiedemann teaches the software, wherein the first software module generates the key hash result, (Tiedemann Col. 19 lines 32-40) and performance of a cryptographic hash operation

on a combination of at least the global identifier and the estimated current time (Tiedemann Col. 19 lines 32-40),

computation of a clock skew by recording a receipt time upon which the verification packet is received and computing a time difference between the receipt time and the local time value (Skelly Col. 7 lines 7-28), computation of the estimated current time at the source corresponding to a current time at a destination using the clock skew (Skelly Col. 6 lines 19-53). The rationale for combining are the same as claim 27 above.

As per claim 18, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Skelly teaches the method, wherein the third software module presents the first time-varying item by displaying the first time-varying item for visual comparison with a display of the second time-varying item intended to be contemporaneous with the display of the first time-varying item (Skelly Col. 5 lines 1-37). The rationale for combining are the same as claim 27 above.

As per claim 28, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Tiedemann discloses the network, wherein the first computing unit communicates with the second computing unit over a wireless link (Tiedemann Fig. 2).

As per claim 29, Tiedemann, Epstein, and Skelly teach all the subject matter as described above. In addition Tiedemann and Skelly teach the network, wherein verification that the second computing unit has received the global identifier of the first computing unit when the

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second time-varying items are presented and changed contemporaneously with the first time-varying items (Tiedemann Col. 19 lines 32-40, and Skelly Col. 2 lines 59-67). The rationale for combining are the same as claim 27 above.

7. Claims 5, 7, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. et al. (Tiedemann, US Patent No.: US 6,216,004 B1) in view of Epstein (Patent No.: US 6,601,172 B1), and Skelly et al. (Skelly, Patent No.: US 6,661,810 B1), and in further view of Alexander (Patent No.: US 6,553,029 B1).

As per claim 5, Tiedemann, Epstein, and Skelly teach all the subject matter as described above.

Tiedemann, Epstein, and Skelly do not explicitly teach the method wherein the verification packet further includes a table inclusive of items displayed as the first time-varying item and the second time-varying item.

However Alexander discloses the method a table inclusive of items (Alexander Col. 5 lines 11-34).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Alexander within the combination system of Tiedemann, Epstein and Skelly because it would allow to store previously processed source and destination address together with source and destination contents associated with the respective source and destination address (Alexander Abstract).

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As per claim 7, Tiedemann, Epstein, Skelly, and Alexander teach all the subject matter as described above. In addition Alexander teaches the method, wherein the information includes a lookup table for selection of the item to be presented (Alexander Col. 5 lines 11-34). The rational for combining are the same as claim 5 above.

As per claim 10, Tiedemann, Epstein, Skelly, and Alexander teach all the subject matter as described above. In addition Alexander teaches the method, wherein the producing of the first time-varying item includes accessing an entry of a lookup table using the key hash result and recovering contents of the entry as the first time-varying item (Alexander Col. 5 lines 11-34). The rational for combining are the same as claim 5 above.

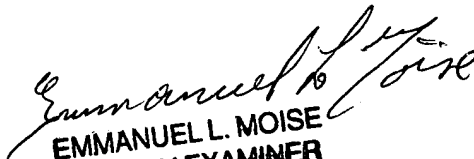
As per claim 17, Tiedemann, Epstein, Skelly, and Alexander teach all the subject matter as described above. In addition Alexander teaches the software, wherein the second software module produces the first time-varying item by accessing an entry of a lookup table using the key hash result and recovering contents of the entry as the first time-varying item (Alexander Col. 5 lines 11-34). The rational for combining are the same as claim 5 above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A Shiferaw whose telephone number is 571-272-3867. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eleni Shiferaw
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EMMANUEL L. MOISE
PRIMARY EXAMINER